

Abstract

The invention relates to a method and a device for depositing especially crystalline layers on especially crystalline substrates in a process chamber of a reactor housing having a water-cooled wall. The floor of said process chamber is heated. At least one reaction gas as a process gas, and hydrogen as a carrier gas, are centrally introduced into the process chamber, and are extracted by a gas evacuation ring surrounding the process chamber. A flush gas flows between the cover of the reactor and the cover of the process chamber. Said flush gas and the flush gas which flushes the area between the reactor wall and the gas evacuation ring are introduced into the outer region of the process chamber, via a gap between the cover of the reactor and the gas evacuation ring which can be lowered for loading the process chamber, in order to be sucked through the openings in the gas evacuation ring with the process gas. The gas which flushes the region between the reactor wall and the gas evacuation ring is nitrogen or a mixture of hydrogen and nitrogen.